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July 26, 2019

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington DC 20554

**Re: ET Docket No. 19-155, *Geophysical Survey Systems, Inc., Request for Waiver of Part 15 of the Commission's Rules to Market an Ultra-Wideband Evaluation Kit*
Ex Parte Communication**

Dear Ms. Dortch:

In its reply comment of July 5, 2019, Geophysical Survey Systems, Inc. (GSSI) proposed to place in this docket a test report showing that the device in question complies with applicable emission limits.

The test report is attached.

These tests used FCC-mandated measurement methods with the device in normal operation—*i.e.*, operating in its “normal transmission mode” with the pulse sequence running—as detailed in Part D(2) of the waiver request.

Please contact me with any questions.

Respectfully submitted,

A handwritten signature in black ink that reads "Mitchell Lazarus".

Mitchell Lazarus
Counsel for Geophysical Survey Systems, Inc.

cc (by email to dgrossman@gpsalliance.org): J. David Grossman, GPS Innovation Alliance

**COMPLIANCE WORLDWIDE INC.
TEST REPORT 389-18**

**In Accordance with the Requirements of
Federal Communications Commission 47 CFR Part 15, Subpart F
Technical Requirements for Ground Penetrating Radar Systems**

Issued to

**Geophysical Survey Systems, Inc.
40 Simon Street
Nashua, NH 03060-3075
603-893-1109**

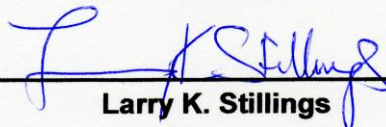
For the

**Localization Ground Penetrating Radar
Model: LGPR**

FCC ID: TBD


Report Issued on November 29, 2018

Tested by

A blue ink signature of Larry K. Stillings, written over a horizontal line.

Larry K. Stillings

Reviewed By

A blue ink signature of Brian F. Breault, written over a horizontal line.

Brian F. Breault

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1. Scope

This test report certifies that the Geophysical Survey Systems LGPR, as tested, meets the FCC Part 15, Subpart F requirements. The scope of this test report is limited to the test sample provided by the client, only in as much as that sample represents other production units. If any significant changes are made to the unit, the changes shall be evaluated and a retest may be required. .

2. Product Details

- 2.1. Manufacturer:** Geophysical Survey Systems Inc.
- 2.2. Model Number:** LGPR
- 2.3. Serial Number:** Pre-production
- 2.4. Description:** LGPR assists autonomous vehicles with lane keeping should snow, rain, dust, or fog obscure lane markers or other above-ground localizing references. A radar system permanently attached under the vehicle looks down through the pavement surface 2 to 3 meters to the roadbed, mapping the subsurface features
- 2.5. Power Source:** 12VDC Battery Powered
- 2.6. Hardware Revision:** N/A
- 2.7. Software Revision:** N/A
- 2.8. Modulation Type:** FMCW, dwells on one frequency for 12.3 μ s before moving to the next
- 2.9. Operating Frequency:** 103 MHz to 403 MHz, at 6 MHz intervals
- 2.10. EMC Modifications:** 36 dB Attenuation was used on the output of the transmitter going into the multiplexer

3. Product Configuration

3.1 Operational Characteristics & Software

1. Turn on the controlling computer system.
2. Turn on the LGPR antenna and allow the unit to boot up.

Software Setup:

1. After boot up of the LGPR antenna start scanning using the control software.

3.2. EUT Hardware

Manufacturer	Model	Serial Number	Description/Function
GSSI	LGPR	Pre production	Localized Ground Penetrating Radar

3.3. EUT Cables/Transducers

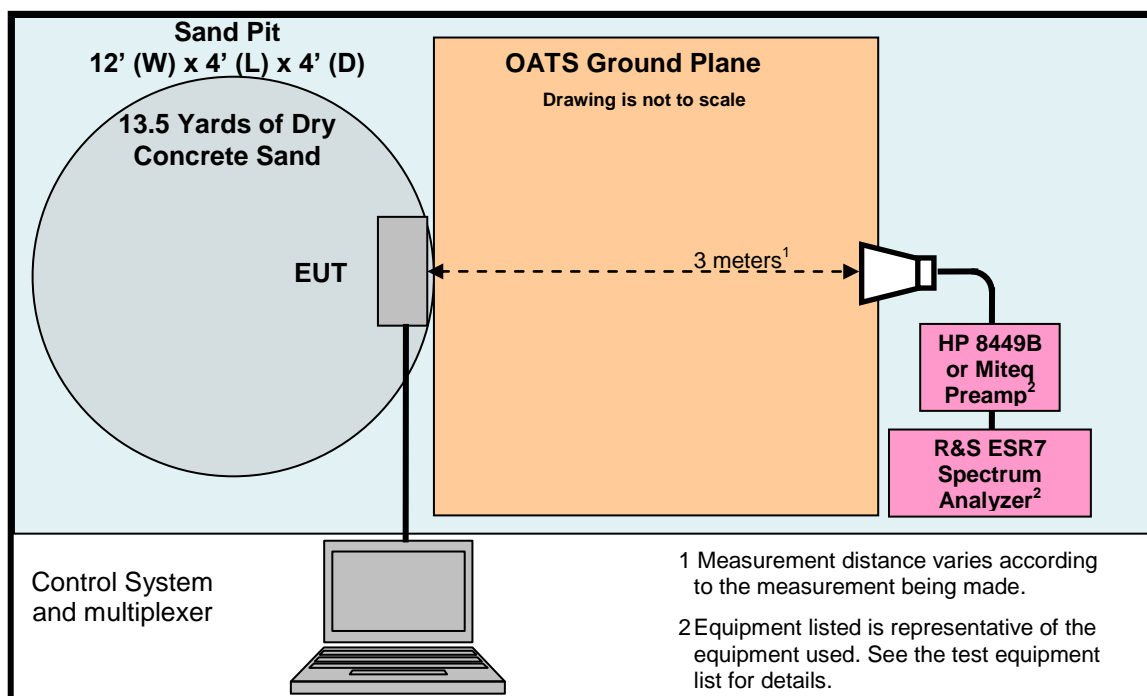
Manufacturer	Model/Part #	Length (m)	Shield Y/N	Description/Function
Any	SMA Cables	3	Y	Connecting cable from control system to LGPR Antenna

3. Product Configuration (continued)

3.4. Support Equipment

Control System

3.5. Test Setup Diagram



4. Measurements Parameters

4.1. Measurement Equipment Used to Perform Test

Device	Manufacturer	Model No.	Serial No.	Cal Due	Cal Interval
EMI Test Receiver, 9kHz - 7GHz	Rohde & Schwarz	ESR7	101156	9/10/2020	2 Years
Spectrum Analyzer	Rohde & Schwarz	FSV40	100899	9/10/2020	2 Years
Microwave Preamp	Hewlett Packard	8449B	3008A01323	9/11/2020	2 Years
Preamp 100 MHz – 7 GHz	Miteq	AFS3-01000200-10-15P-4	988773	4/17/2020	2 Years
Bilog Antenna 30 to 2000 MHz	Com-Power	AC-220	25509	5/12/2019	3 Year
Horn Antenna 960 MHz to 18 GHz	Electro-Metrics	EM-6961	6337	10/3/2020	2 Years
Barometer – Temperature & Humidity	Control Company	4195	ID236	4/3/2020	2 Year

¹ ESR7 Firmware revision: V3.36, SP2 Date installed: 11/02/2017 Previous V3.36, installed 05/16/2017.
² FSV40 Firmware revision: V2.30 SP4, Date installed: 05/04/2016 Previous V2.30 SP1, installed 10/22/2014.

4.2. Measurement & Equipment Setup

Test Date: 10/24/2018, 10/25/2018
Test Engineer: Larry Stillings
Normal Site Temperature (15 - 35°C): 21.6
Relative Humidity (20 - 75%RH): 35
Frequency Range: 30 MHz to 4 GHz
Measurement Distance: 3 Meters
EMI Receiver IF Bandwidth: 120 kHz - 30 MHz to 960 MHz
1 MHz - Above 960 MHz
EMI Receiver Avg Bandwidth: 300 kHz - 30 MHz to 960 MHz
3 MHz - Above 960 MHz
Detector Function: Peak, Quasi-Peak, EMI
Average and RMS Average

4. Measurements Parameters (continued)

4.3. Measurement Procedures

Test measurements were made in accordance FCC Part 15.509, 15.521, IC RSS-220 Issue I, RSS-Gen, Issue 4, ANSI C63.10:2013 Clause 10 and KDB Publication 393764 D01 UWB FAG v01, dated July 31, 2015.

The test methods used to generate the data is this test report is in accordance with ANSI C63.10:2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

In accordance with ANSI C63.10:2013, Section 10.2.2, the device under test was placed on a bed of dry sand and rotated through 16 azimuth angles (per Clause 5.4) to determine which produced the highest emission relative to the limit. The azimuth that produced the highest emission relative to the limit was used for all radiated emission measurements.

4.4. Measurement Uncertainty

The following uncertainties are expressed for an expansion/coverage factor of K=2.

RF Frequency (out of band)	$\pm 1 \times 10^{-8}$
Radiated Emission of Transmitter to 10 GHz	± 4.55 dB
Radiated Emission of Receiver	± 4.55 dB
Temperature	$\pm 0.91^{\circ}$ C
Humidity	$\pm 5\%$

5. Measurements Summary

Test Requirement	FCC Rule Requirement	Test Report Section	Result	Comment
Antenna Requirement	15.203	6.1	Compliant	The antenna is housed within a sealed enclosure with the intentional radiator.
Operational Requirements	15.509 (b)	6.2	Compliant	
UWB Bandwidth	15.503 (a) 15.509 (a)	6.3	Not Compliant	FMCW Radar, requires waiver
Spurious Radiated Emissions	15.509 (d) 15.209	6.4	Compliant	
Radiated Emissions in GPS Bands	15.509 (e) 15.209	6.5	Compliant	
Peak Emissions in a 50 MHz Bandwidth	15.509 (f)	6.6	Compliant	
Conducted Emissions	15.207	6.7	N/A	EUT is battery powered
Radio Frequency Exposure	FCC OET Bulletin 65	6.8	Compliant	

6. Measurement Data**6.1. Antenna Requirement (15.203)**

Requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply

Result: The antenna utilized by the device under test is an internal, non user replaceable unit.

6.2. Operational Requirements of the Device under Test (15.509 (b))

Requirement: Operation under the provisions of this section is limited to GPRs and wall imaging systems operated for the purposes with law enforcement, fire fighting, emergency rescue, scientific research, commercial mining, or construction.

Result: The manufacturer states that the device under test complies with the requirements outlined in section FCC Part 15.509 (b).

6.3. UWB Bandwidth (15.503 (a), 15.509 (a))

Requirement: The UWB bandwidth is the frequency band bounded by the points that are 10 dB below the highest radiated emission, as based on the complete transmission system including the antenna. The upper boundary is designated f_H and the lower boundary is designated f_L . The frequency at which the highest radiated emission occurs is designated f_M . The center frequency f_C , equals $(f_H + f_L) / 2$. The fractional bandwidth equals $2 * (f_H - f_L) / (f_H + f_L)$.

Result: Not Compliant, FMCW device operating between 109 to 403 MHz, requirement requires a waiver.

Requirement: The UWB bandwidth of an imaging system operating under the provisions of this section must be below 10.6 GHz.

Result: Compliant, the highest frequency (f_H) of the device is 403 MHz which is below 10.6 GHz.

6. Measurement Data (continued)

6.4. Spurious Radiated Emissions (15.509 (d), 15.209)

Requirement: The radiated emissions at or below 960 MHz from a device operating under the provisions of this section shall not exceed the emission levels in Section 15.209. The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz. Limits are converted from EIRP (dBm) to field strength at 3 meters using a conversion factor of 95.2.

Frequency (MHz)	EIRP (dBm)	Field Strength (dB μ V/m)
960 - 1610	-65.3	29.9
1610 - 1990	-53.3	41.9
1990 - 3100	-51.3	43.9
3100 - 10600	-41.3	53.9
Above 10600	-51.3	43.9

Radiated Emissions Field Strength Limits at 3 Meters (Section 15.209)

Frequency (MHz)	Field Strength (dB μ V/m)
30 - 88	40.0
88 - 216	43.5
216 - 960	46.0

Test Notes: Refer to Section 4.1 for the test equipment used and Section 4.2 for the test equipment setups.

6. Measurement Data (continued)

6.4. Spurious Radiated Emissions (15.209 continued)

6.4.1. 30 MHz to 960 MHz, Horizontal measured at 3 Meters

Frequency (MHz)	Amplitude (dB μ V/m)		Limit (dB)	Margin (dB)	Polarity (H/V)	Antenna Height (cm)	Azimuth (Dev.)
	Peak	Quasi-Peak	Quasi-Peak				
139.01	42.08	36.35	43.5	-7.15	H	200	270
145.01	42.03	36.32	43.5	-7.18	H	200	270
151.01	41.33	35.26	43.5	-8.24	H	200	270
157.00	40.61	33.51	43.5	-9.99	H	200	270
163.01	39.27	34.59	43.5	-8.91	H	200	270
169.02	40.37	35.73	43.5	-7.77	H	200	270
175.00	40.41	35.85	43.5	-7.65	H	200	270
181.00	39.60	35.13	43.5	-8.37	H	200	270
193.03	42.78	37.26	43.5	-6.24	H	200	270
205.01	42.71	37.71	43.5	-5.79	H	200	270
211.01	43.19	37.64	43.5	-5.86	H	200	270
217.01	43.50	37.81	46.0	-8.19	H	200	270
223.02	42.92	37.45	46.0	-8.55	H	200	270
229.02	41.99	37.18	46.0	-8.82	H	200	270
235.01	41.91	37.34	46.0	-8.66	H	200	270
241.02	42.75	37.92	46.0	-8.08	H	200	270
247.02	42.38	37.43	46.0	-8.57	H	200	270
253.02	42.36	36.95	46.0	-9.05	H	200	270
259.02	42.08	36.34	46.0	-9.66	H	200	270
265.02	41.55	35.79	46.0	-10.21	H	200	270
271.02	43.28	37.70	46.0	-8.30	H	200	270
277.01	42.44	36.59	46.0	-9.41	H	200	270
283.03	44.49	38.76	46.0	-7.24	H	200	270
289.02	44.94	39.26	46.0	-6.74	H	200	270
295.01	44.50	39.16	46.0	-6.84	H	200	270

6. Measurement Data (continued)

6.4. Spurious Radiated Emissions (15.209 continued)

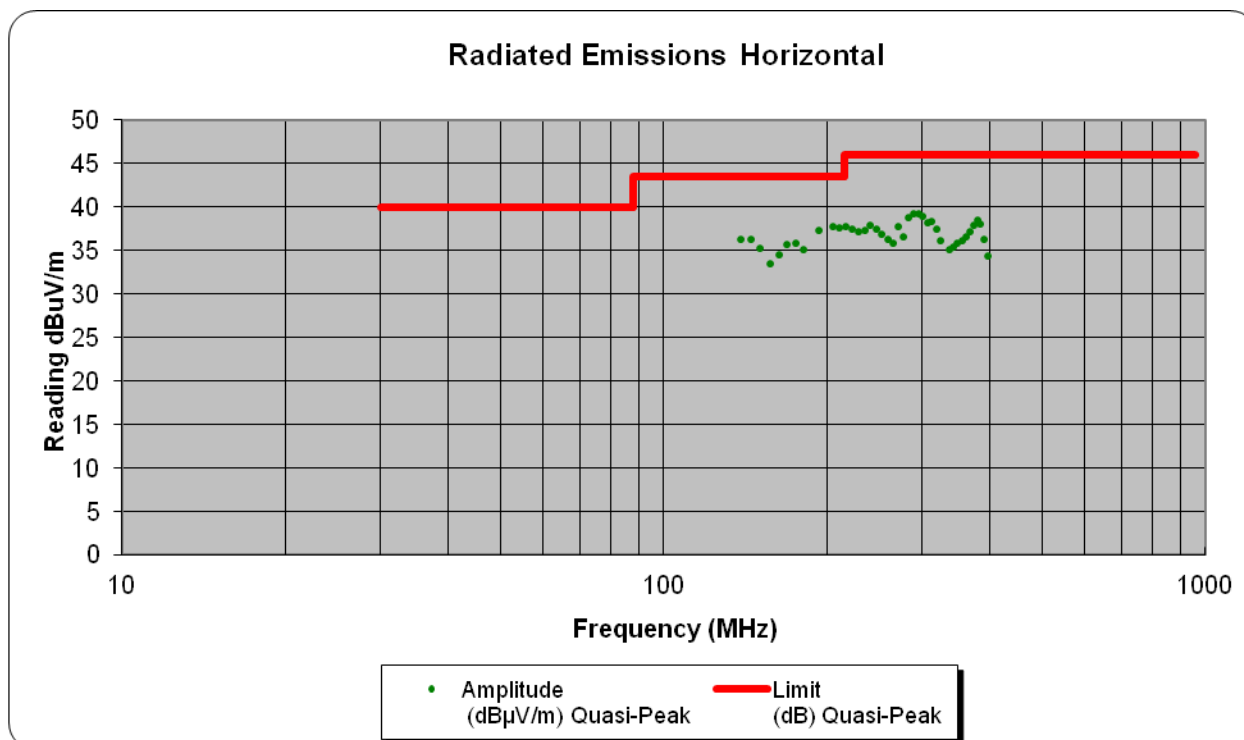
6.4.1. 30 MHz to 960 MHz, Horizontal measured at 3 Meters (continued)

Frequency (MHz)	Amplitude (dB μ V/m)		Limit (dB)	Margin (dB)	Polarity (H/V)	Antenna Height (cm)	Azimuth (Dev.)
	Peak	Quasi-Peak	Quasi-Peak				
301.02	44.39	38.95	46.0	-7.05	H	200	270
307.02	43.50	38.20	46.0	-7.80	H	200	270
313.02	44.07	38.29	46.0	-7.71	H	200	270
319.02	43.31	37.51	46.0	-8.49	H	200	270
325.03	41.60	36.08	46.0	-9.92	H	200	270
337.02	41.41	35.06	46.0	-10.94	H	200	270
343.03	41.39	35.44	46.0	-10.56	H	200	270
349.02	41.64	35.88	46.0	-10.12	H	200	270
355.03	41.48	36.19	46.0	-9.81	H	200	270
361.02	42.08	36.53	46.0	-9.47	H	200	270
367.03	42.48	37.16	46.0	-8.84	H	200	270
373.02	43.25	37.88	46.0	-8.12	H	200	270
379.02	44.86	38.43	46.0	-7.57	H	200	270
385.03	44.09	38.03	46.0	-7.97	H	200	270
391.03	42.31	36.36	46.0	-9.64	H	200	270
397.03	40.65	34.42	46.0	-11.58	H	200	270

6. Measurement Data (continued)

6.4. Spurious Radiated Emissions (15.209 continued)

6.4.2. 30 MHz to 960 MHz, Horizontal Plot



6. Measurement Data (continued)

6.4. Spurious Radiated Emissions (15.209 continued)

6.4.3. 30 MHz to 960 MHz, Vertical measured at 3 Meters

Frequency (MHz)	Amplitude (dB μ V/m)		Limit (dB)	Margin (dB)	Polarity (H/V)	Antenna Height (cm)	Azimuth (Dev.)
	Peak	Quasi-Peak	Quasi-Peak				
139.01	38.72	31.87	43.5	-11.63	V	100	180
145.01	38.68	29.99	43.5	-13.51	V	100	180
151.00	34.45	28.75	43.5	-14.75	V	100	180
157.01	39.02	32.40	43.5	-11.10	V	100	180
163.01	40.30	34.85	43.5	-8.65	V	100	180
169.01	40.78	35.79	43.5	-7.71	V	100	180
175.01	40.32	35.19	43.5	-8.31	V	100	180
181.03	42.14	36.36	43.5	-7.14	V	100	180
187.02	44.18	37.99	43.5	-5.51	V	100	180
193.02	43.82	38.38	43.5	-5.12	V	100	180
205.01	41.33	36.63	43.5	-6.87	V	100	180
211.01	42.51	37.35	43.5	-6.15	V	100	180
217.01	43.09	37.92	46.0	-8.08	V	100	180
223.01	42.92	38.38	46.0	-7.62	V	100	180
229.02	43.81	39.09	46.0	-6.91	V	100	180
235.01	43.41	38.48	46.0	-7.52	V	100	180
241.02	43.57	38.61	46.0	-7.39	V	100	180
247.02	44.22	39.50	46.0	-6.50	V	100	180
253.02	45.29	40.76	46.0	-5.24	V	100	180
259.02	45.04	40.93	46.0	-5.07	V	100	180
265.03	43.47	39.33	46.0	-6.67	V	100	180
271.02	42.41	37.60	46.0	-8.40	V	100	180
277.03	39.51	34.53	46.0	-11.47	V	100	180
283.02	44.11	38.53	46.0	-7.47	V	100	180
289.02	44.41	38.70	46.0	-7.30	V	100	180
295.02	45.56	40.12	46.0	-5.88	V	100	180

6. Measurement Data (continued)

6.4. Spurious Radiated Emissions (15.209 continued)

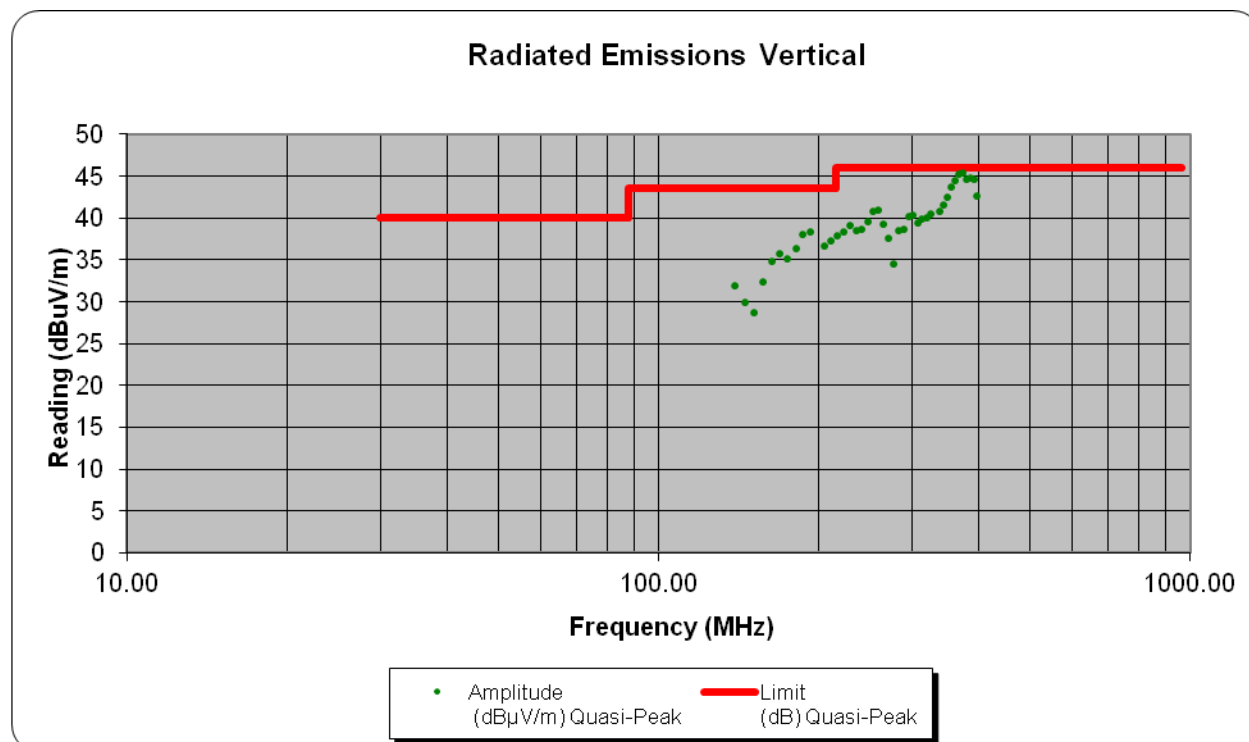
6.4.3. 30 MHz to 960 MHz, Vertical measured at 3 Meters (continued)

Frequency (MHz)	Amplitude (dB μ V/m)		Limit (dB)	Margin (dB)	Polarity (H/V)	Antenna Height (cm)	Azimuth (Dev.)
	Peak	Quasi-Peak	Quasi-Peak				
301.02	45.06	40.33	46.0	-5.67	V	100	180
307.01	44.25	39.44	46.0	-6.56	V	100	180
313.01	45.03	39.95	46.0	-6.05	V	100	180
319.02	44.99	40.05	46.0	-5.95	V	100	180
325.02	46.14	40.50	46.0	-5.50	V	100	180
337.02	47.52	40.73	46.0	-5.27	V	100	180
343.02	48.10	41.64	46.0	-4.36	V	100	180
349.02	47.70	42.51	46.0	-3.49	V	100	180
355.03	48.70	43.66	46.0	-2.34	V	100	180
361.02	49.16	44.46	46.0	-1.54	V	100	180
367.02	49.79	45.31	46.0	-0.69	V	100	180
373.02	49.33	45.40	46.0	-0.60	V	100	180
379.03	48.92	44.66	46.0	-1.34	V	100	180
385.02	48.77	44.74	46.0	-1.26	V	100	180
391.01	48.73	44.60	46.0	-1.40	V	100	180
397.02	47.25	42.70	46.0	-3.30	V	100	180

6. Measurement Data (continued)

6.4. Spurious Radiated Emissions (15.209 continued)

6.4.4. 30 MHz to 960 MHz, Vertical Plot

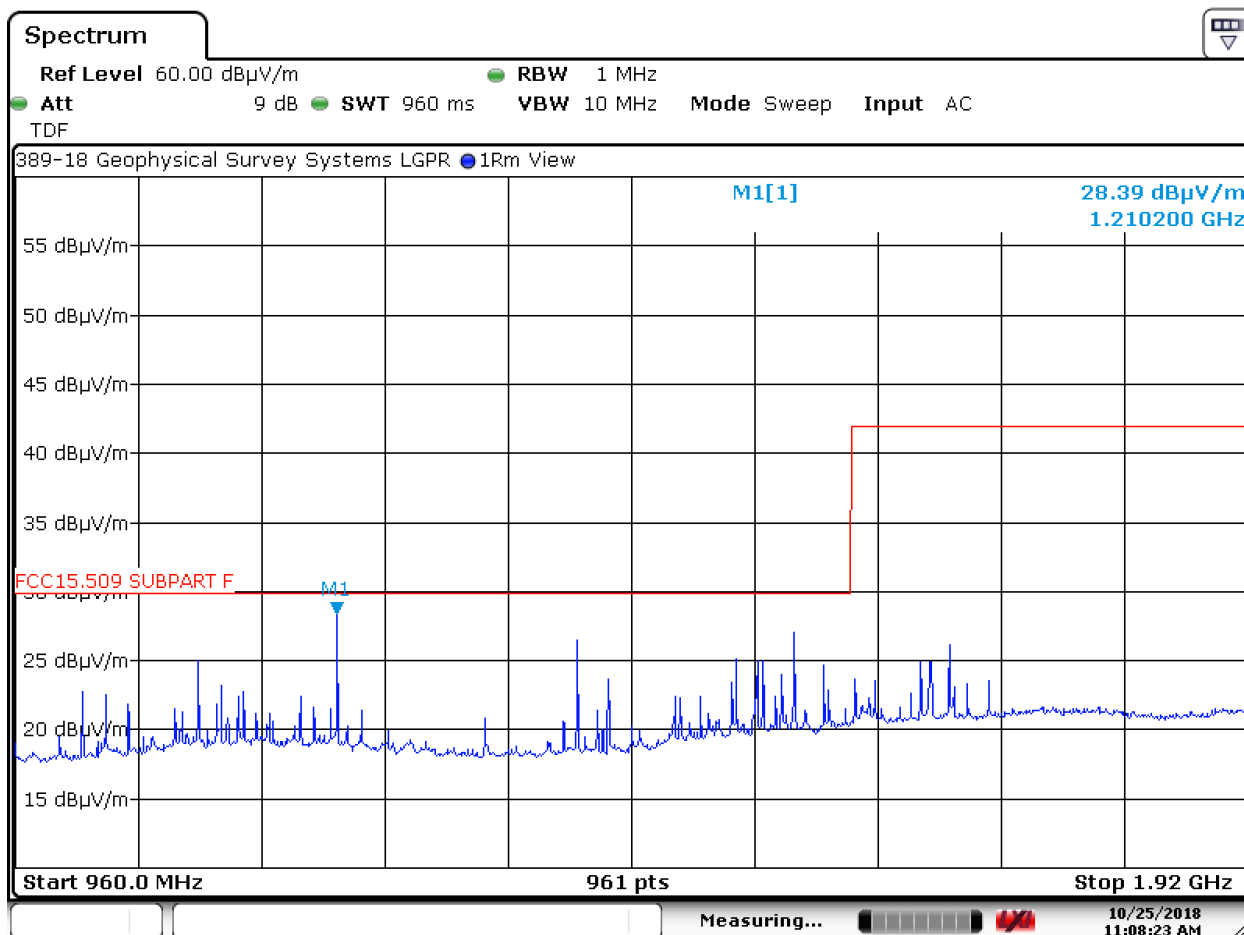


6. Measurement Data (continued)

6.4. Spurious Radiated Emissions (15.509 (d))

6.4.5. 960 MHz to 4 GHz at 3 meters

6.4.5.1 Plot of RMS Power 960 to 1920 MHz Horizontal Polarity



Date: 25.OCT.2018 11:08:21

Notes: Using: 1 MHz RBW / 10 MHz VBW and 1mS/MHz RMS Average Detector.

There were no other measurable emissions between 1.92 to 4 GHz.

Test Number: 389-18

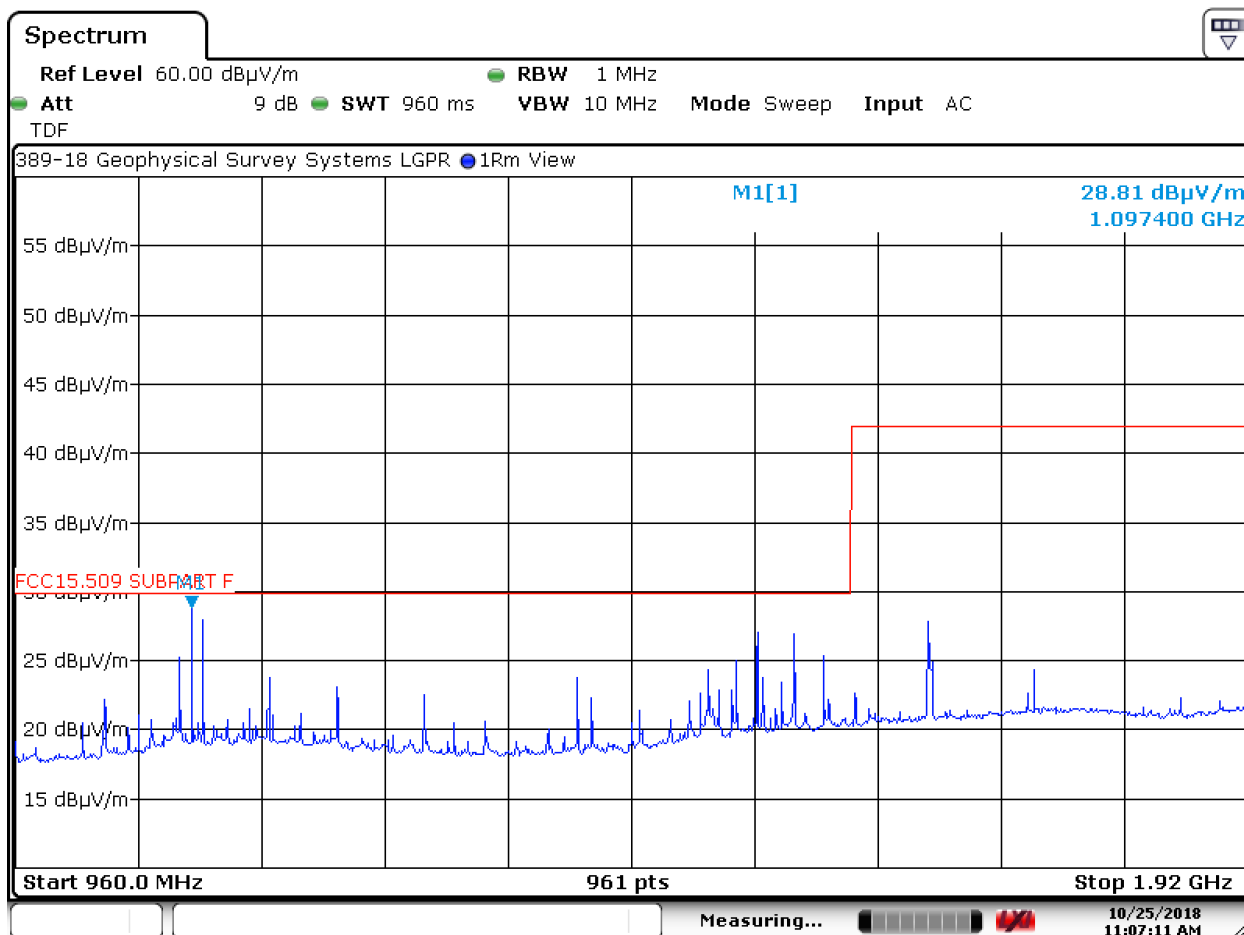
Issue Date: 11/29/2018

6. Measurement Data (continued)

6.4. Spurious Radiated Emissions (15.509 (d))

6.4.5. 960 MHz to 4 GHz at 3 meters

6.4.5.2 Plot of RMS Power 960 to 1920 MHz Vertical Polarity



Date: 25.OCT.2018 11:07:08

Notes: Using: 1 MHz RBW / 10 MHz VBW and 1mS/MHz RMS Average Detector.

There were no other measurable emissions between 1.92 to 4 GHz.

6. Measurement Data (continued)**6.5. Spurious Radiated Emissions in GPS Bands (15.509 (e))**

Requirement: In addition to the radiated emission limits specified in the table in paragraph (d) of this section, UWB transmitters operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz:

Frequency (MHz)	EIRP (dBm)	Field Strength (dB μ V/m) at 3 Meters
1164 - 1240	-75.3	19.9
1559 - 1610	-75.3	19.9

6.5.1. Measurement & Equipment Setup

EMI Receiver IF Bandwidth: 1 kHz
EMI Receiver Avg Bandwidth: 10 kHz
Detector Function: RMS

6.5.2. Test Procedure

Test measurements were made in accordance with ANSI C63.10:2013, American National Standard for Testing Unlicensed Wireless Devices.

6.5.3. 1164 to 1240 MHz & 1559 to 1610 MHz

There were no broadband emissions related to the UWB transmitter. Measured signals were narrowband and related to the microprocessor / clocks and do not fall under the requirements of this section. Measurements were made at 3 Meters and the -75.3 dBm limit was converted to a field strength limit of 19.9 dB μ V/m using a distance correction factor of 95.2.

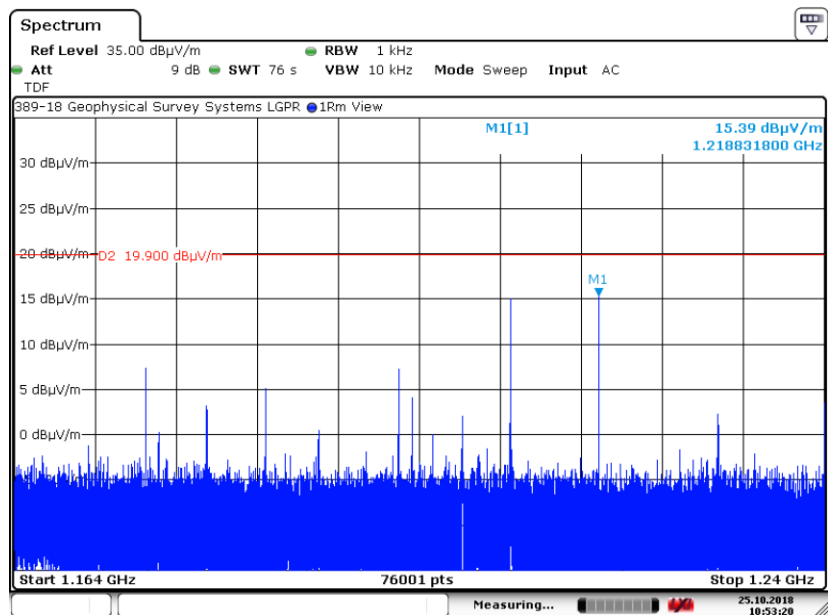
Test Number: 389-18

Issue Date: 11/29/2018

6. Measurement Data (continued)

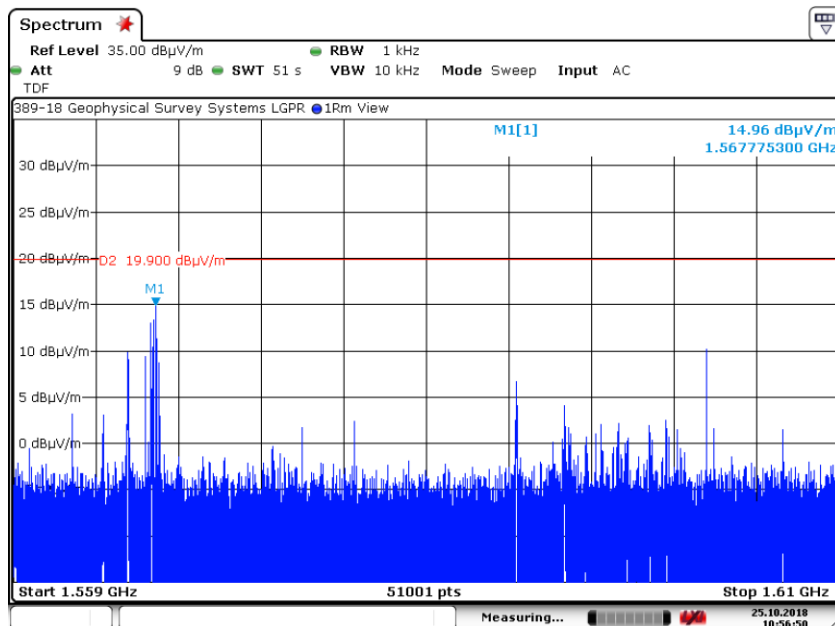
6.5.4 Spurious Radiated Emissions in GPS Bands (15.509 (e) continued)

6.5.4.1 1164 to 1240 MHz - Horizontal



Date: 25.OCT.2018 10:53:17

6.5.4.2 1559 to 1610 MHz - Horizontal



Date: 25.OCT.2018 10:56:47

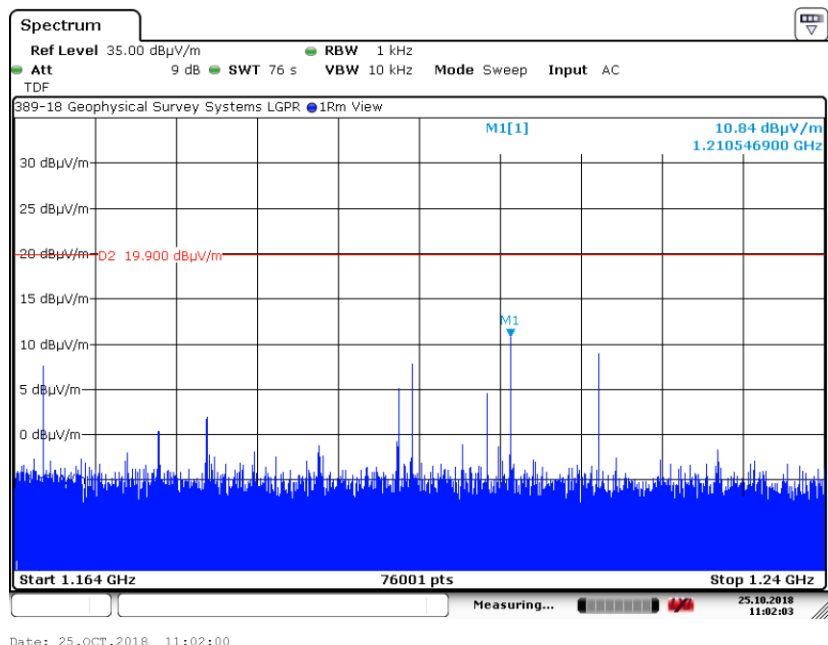
Test Number: 389-18

Issue Date: 11/29/2018

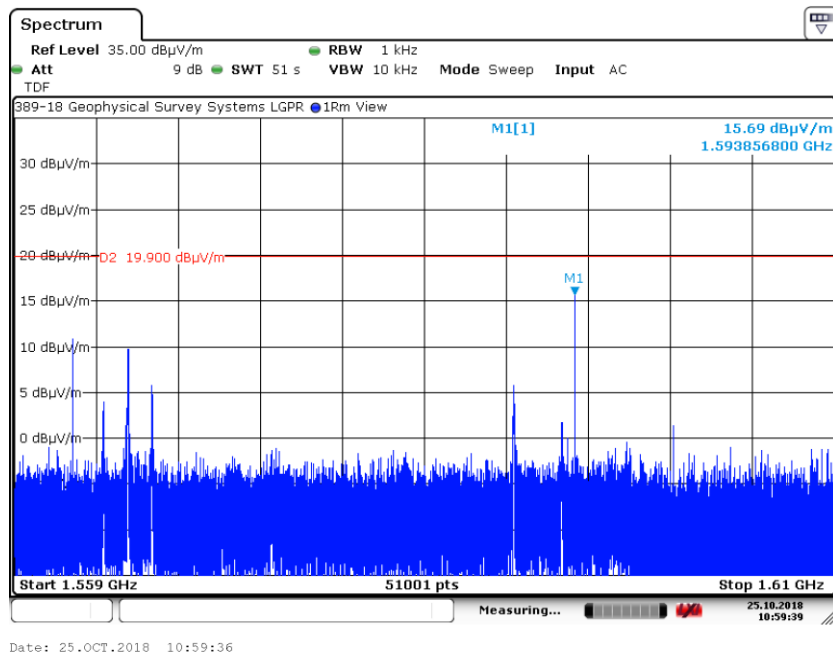
6. Measurement Data (continued)

6.5.4 Spurious Radiated Emissions in GPS Bands (15.509 (e) continued)

6.5.4.3 1164 to 1240 MHz - Vertical



6.5.4.4 1559 to 1610 MHz - Vertical



6. Measurement Data (continued)**6.6. Peak Emissions in a 50 MHz Bandwidth (15.509 (f))**

Requirement: For UWB devices where the frequency at which the highest radiated emissions occurs, f_M , is above 960 MHz, there is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency f_M . That limit is 0 dBm EIRP. It is acceptable to employ a different resolution bandwidth, and a correspondingly different peak emission limit, following the procedures described in Section 15.521. The 0 dBm limit was converted to -13.98 dBm limit when using a 10 MHz RBW. The limit was then converted to a 3 meter field strength limit of 81.22 dB μ V/m by using a conversion factor of 95.2.

Result: Compliant, the device does not transmit/operate above 403 MHz.

6. Measurement Data (continued)

6.7. Conducted Emissions, Regulatory Limit: FCC Part 15.209

Frequency Range (MHz)	Limits (dB μ V)	
	Quasi-Peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5.0	56	46
5.0 to 30.0	60	50

* Decreases with the logarithm of the frequency.

6.7.1. Measurement Equipment Used to Perform Test

Device	Manufacturer	Model No.	Serial No.	Cal Due
EMI Receiver	Hewlett Packard	8546A	3330A00115	9/11/2020
RF Filter Section	Hewlett Packard	85460A	3325A00121	9/11/2020
LISN	EMCO	3825/2	9109-1860	9/10/2019

6.7.2. Measurement & Equipment Setup

Test Date:	N/A
Test Engineer:	N/A
Site Temperature (°C):	24.1
Relative Humidity (%RH):	41
Frequency Range:	0.15 MHz to 30 MHz
EMI Receiver IF Bandwidth:	9 kHz
EMI Receiver Avg Bandwidth:	30 kHz
Detector Functions:	Peak, Quasi-Peak. & Average

6.7.3. Test Procedure

Test measurements were made in accordance with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

Note: EUT is automotive battery powered

6. Measurement Data (continued)

6.8. Public Exposure to Radio Frequency Energy Levels (1.1307 (b)(1))

6.8.1. SAR Test Exclusion for UWB transmitter

Requirement: Portable devices are subject to radio frequency radiation exposure requirements as explained in FCC KDB 447498 D01 General RF Exposure Guidance v06, dated October 23, 2015.

For a 1-g SAR, the test exclusion result must be ≤ 3.0 and ≤ 7.5 for 10-g extremity SAR.

Test Notes: The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by the following formula:

$$\text{SAR Test Exclusion} = \frac{P_{\text{MAX}}}{d_{\text{MIN}}} \times \sqrt{f_{(\text{GHz})}} \quad (1)$$

P_{MAX} mW Maximum power of channel, including tune-up tolerance
 d_{MIN} mm Minimum test separation distance, mm (≤ 50 mm)
 $f_{(\text{GHz})}$ GHz $f_{(\text{GHz})}$ is the RF channel transmit frequency in GHz (>100 MHz and <6 GHz)
 Power and distance are rounded to the nearest mW and mm before calculation
 The result is rounded to one decimal place for comparison
 The values 3.0 and 7.5 are referred to as numeric thresholds below

Per KDB 447498 Appendix A SAR Exclusion Threshold at 50 mm is 274 mW at 300 MHz and 224 mW at 450 MHz.

Extremity SAR is 2.5 times this value or 685 mW at 300 MHz and 560 mW at 450 MHz.

The EUT transmits -45.44 dBm EIRP or 0.00003 mW at 367 MHz and therefore meets the SAR Test Exclusion.

Input:	P_{MAX}	0.00003	mW
	d_{MIN}	50.00	mm
	$f_{(\text{GHz})}$	0.37	GHz
Test Exclusion:		0.0000003	
Limit Exemption:		7.50	

7. Test Site Description

Compliance Worldwide is located at 357 Main Street in Sandown, New Hampshire. The test sites at Compliance Worldwide are used for conducted and radiated emissions testing in accordance with the Federal Communications Commission (FCC) and Industry Canada standards. Through our American Association for Laboratory Accreditation (A2LA) ISO Guide 17025:2005 Accreditation our test sites are designated with the FCC (designation number **US1091**), Industry Canada (file number **IC 3023A-1**) and VCCI (Member number 3168) under registration number A-0274.

Compliance Worldwide is also designated as a Phase 1 CAB under APEC-MRA (US0132) for Australia/New Zealand AS/NZS CISPR 22, Chinese-Taipei (Taiwan) BSMI CNS 13438 and Korea (RRA) KN 11, KN 13, KN 14-1, KN 22, KN 32, KN 61000-6-3, KN 61000-6-4.

The radiated emissions test site is a 3 and 10 meter enclosed open area test site (OATS). Personnel, support equipment and test equipment are located in the basement beneath the OATS ground plane.

The conducted emissions site is part of a 16' x 20' x 12' ferrite tile chamber and uses one of the walls for the vertical ground plane required by EN 55022. A second conducted emissions site is also located in the basement of the OATS site with a 2.3 x 2.5 meter ground plane and a 2.4 x 2.4 meter vertical wall.

Both sites are designed to test products or systems 1.5 meters W x 1.5 meters L x 2.0 meters H, floor standing or table top.

8. Test Images

8.1. Spurious Emissions – 30 MHz – 960 MHz Front



8. Test Images

8.2. Spurious Emissions – 30 MHz – 960 MHz Rear

